

# Medical school differences: beneficial diversity or harmful deviations?

I C McManus

Many factors may explain why graduates from different medical schools differ in their professional competence.

British medical students enter medical school at the age of 18 and qualify 5 or 6 years later at the age of about 24. By that time they have spent their whole adult life—and, indeed, a quarter of their entire life—in one educational establishment. So all-encompassing, so involving, so potentially overwhelming is a medical school that sociologists such as Erving Goffman might classify them with other “total institutions” such as prisons, asylums, monasteries, and barracks where daily life is regimented, where the social world primarily revolves around the institution and its members, and whose ultimate goal is a plan structured as much for the ultimate benefit of society as for the needs of the inmates.

If educational environments really matter, then medical schools should be the ideal place for spotting an effect. So what demonstrable effect is there? Five years at 300 working days a year, eight hours a day (and never mind the nights), is more than the notional 10 000 hours which are said to be necessary to become an expert in a skill. Indeed, there are 2000 hours left over to become pretty skilled in a host of other activities such as playing rugby, drama, music, or any other avocation.

Anecdotes abound about the experience of medical school, and a useful anthology is *“My medical school”* edited by the doctor-poet Dannie Abse.<sup>1</sup> In his introduction, Abse comments on how many aspects of medical education seem common to all medical schools, and that there are more similarities than differences. An educationalist, however, reads the accounts very differently. When Lord Platt described how in Sheffield during the First World War there were only 12 students in the year, one wonders how the experience must have differed from that of Sir Derrick Dunlop in 1920s Edinburgh where “the crowd was so great that it was often necessary to stand on a bench to catch a glimpse of the patient under discussion”. Another doctor-poet, Edward Lowbury, contrasts 1930s Oxford where the emphasis was

on “the growing points and gaps in knowledge, the disciplines of research and the critical reading of original papers” with The London Hospital where “the approach was more dogmatic, and the unwary might have imagined that all knowledge was wrapped up in their textbooks and lecture notes”. Is it possible that so many formative years in such different institutions resulted in doctors who are almost indistinguishable?

Despite its importance and obviousness, few studies have assessed the key question of the extent to which different educational environments—be they differences in philosophy, method of delivery, content, approach, attitudes, or social context—produce different sorts of doctor. Folk mythology certainly believes that medical schools make a difference—as the generic version of one joke goes: “You can tell a St Swithin’s man but you cannot tell him much”. However, an extreme contrarian view says that none of these things matter. After all, “cream rises to the top” irrespective of its container, and bright motivated creative medical students will pick out what matters from the multifarious raw material presented by their medical school. When multitasking ability is allied with a professionally driven motivation and a wealth of clinical experience (and, as Abse says, “Every patient ... teaches his physician about the subject of medicine”), then caring, compassion, and clinical competence are surely inevitable, whatever the educational environment. Hard data to refute that strong position are difficult to find, mainly because few studies have compared the educational effects of medical schools. There are many reasons for this, not the least of which is that institutions do not like being compared. When medical schools are weighed in the balance then some may be found wanting, so a sophisticated, self-congratulatory, mutually supporting culture of educational protectionism has arisen. Woe betide this person who asks such questions—they can only make enemies and few will thank them, even

should the institutions themselves have originated the study.

Such an educational context, along with the intrinsic interest of understanding malpractice, makes the paper by Waters *et al*<sup>2</sup> in this issue of *QSHC* of double interest. Information on malpractice claims of individual doctors is publicly available in some American states, making it possible—without the need for schools themselves to cooperate—to ask whether the graduates of some schools are more likely to be sued than others. Of course, whenever institutions can be ranked in order then some are inevitably higher than others—after all, even random numbers differ in size—and the challenge is to demonstrate convincingly that such differences are genuine. Perhaps most crucial, as here, is the demonstration of long term stability; schools producing a higher proportion of graduates with malpractice claims at one time tend to be those that also have a higher proportion at another time. What might cause such systematic differences in the graduates of different institutions?

Many things, is the simple answer. Different sorts of applicant apply to different sorts of schools for different reasons,<sup>3</sup> and different schools probably use different criteria and methods for selecting their entrants from among those applicants.<sup>4,5</sup> Medical schools differ in their social worlds and in their philosophy, outlook and approach to teaching,<sup>6</sup> and students at different schools have different amounts of clinical experience.<sup>7</sup> The net result of these and other differences is that graduates of different medical schools end up in different careers.<sup>8</sup>

“... the medical student is the aggregate of a range of influences ...”

Implicit in any such view of medical education is an “additive model” whereby the medical student is the aggregate of a range of influences that model him or her in the way that clay is moulded by the fingers of a sculptor. That, though, is only part of the story. Medical schools are dynamic social institutions in which the students interact with each other, each year or class developing its own personality which is far from predictable from the sum of its parts. This becomes painfully apparent to medical school examiners who find a far higher proportion of failures in one year than previously, despite the course being the same, the examination being similar, and the average social and educational qualifications of the students seeming to be equivalent. Some years are “good” and others “bad” because students, like peers in general, influence each other in their attitudes and approaches to education. A more subtle

version of this argument suggests that graduates of different institutions differ in relation to the diversity (the variance) in the individuals in their classes. A rich and complex social, ethnic, and class mix among the students is said, with some supporting evidence,<sup>9</sup> to result in more socially able graduates who can interact more effectively in complex, modern social worlds.<sup>10</sup>

Whether any or all of these factors are responsible for the differences in malpractice found by Waters *et al*<sup>2</sup> is far from clear at present. What is clear is that graduates from different medical schools not only differ in their propensity to cheer for Light Blue rather than Dark Blue or some other colour, but also in their professional competence (or, more precisely, their incompetence).

Understanding the reasons for this will tell us both about malpractice and about the enduring effects of different approaches to education.

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#### Author's affiliation

**I C McManus**, Professor of Psychology and Medical Education, Department of Psychology, University College London, London WC1E 6BT, UK; i.mcmanus@ucl.ac.uk

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#### Monitoring outcomes in primary care

## Monitoring clinical outcomes in primary care

**R Baker**

Is monitoring clinical outcomes in primary care possible and, if so, is it worthwhile?

Several arguments can be readily raised against monitoring outcomes in primary care. Many patients attending primary care have minor self-limiting illnesses, and the only outcomes that might be of interest for monitoring would be significant adverse events such as drug reactions. At the practice or practitioner level the numbers of patients with significant disorders are small, and distinguishing the impact of variations in quality of care from case mix and random variation is difficult. Research evidence is often incomplete and the relationship between the process of care and its outcome is not well established. The interval between the delivery of health-care interventions and eventual outcome can be many years, as in the case of illness prevention strategies. Primary care is provided by teams, and it is frequently impossible to ascribe a particular outcome to the care provided by an individual doctor or nurse. Some family doctors would also argue that their role is more complex than simply the achievement of desirable clinical outcomes following illness episodes; family doctors have long term relationships with their patients, and ultimately all their patients die.

Intermediate outcomes have offered one approach for responding to these problems. Monitoring of immunisation

rates has long been routine in the healthcare systems of many countries, and in recent years disease control markers such as glycated haemoglobin or blood pressure have begun to be included in monitoring schemes. The validity of intermediate outcome measures depends in large measure on the completeness of the data. While information about immunisation in a population of children may be relatively easy to compile, the creation and maintenance of an accurate list of all patients with diabetes or ischaemic heart disease is much more difficult. When financial incentives are attached to the achievement of intermediate outcome targets, the problem of obtaining complete and accurate data can increase. Monitoring of deaths avoids some of the problems inherent to monitoring of intermediate outcomes. In most countries, central systems to collect and record information about all deaths are in place, and the data are much more likely to be complete. However, the disadvantages of monitoring mortality in primary care have been regarded as insurmountable, and include the small annual number of deaths in the small populations of primary care teams and practitioners, the delay between the delivery of care and death, the sharing of care between

different practitioners and between primary and secondary care, and the impact of case mix. Beaumont and Hurwitz, in this issue of *QSHC*, have identified another problem.<sup>1</sup> General practices have considerable difficulty in obtaining details about all the deaths among their patients, and they recommend that a central system should be established to fulfil this task. I have not been able to identify any developed country in which death rates in populations cared for by primary care teams are routinely studied to monitor performance at the level of the team.

" . . . always monitor key outcomes"

The discovery that a general practitioner was able to murder more than 200 patients over a period of 20 years and not be detected until he decided to forge the will of one of the patients he had killed has caused practitioners in the UK to question the belief that monitoring mortality in the small populations of primary care is not worthwhile.<sup>2</sup> Family doctors in other countries would be wise to take note of the UK experience and consider whether they too should rethink the widely held view on the use of mortality data. A monitoring system is to be set up in the UK following a recommendation made as a consequence of a review of the clinical practice of the GP murderer.<sup>3</sup> Problems will be encountered, but new methods of analysis suitable to small numbers will overcome some of these. Local knowledge of the populations of patients served by different primary care teams and the patterns of work of different doctors will help to overcome other problems. If information about other outcomes such as stroke or myocardial infarction were included in the monitoring system, it may prove possible to monitor the impact of clinical policies and identify primary care teams